



NORTHERN HARDWOOD NOTES

Growth And Development Of Browsed Seedlings

For long it was assumed that deer browsing on the terminal shoot of sugar maple was detrimental to height growth, stem form, and vigor. Does browsing permanently damage sugar maple in northern hardwood stands?

The answer is no, as long as the seedlings are growing vigorously.

A 5-year study in northern Wisconsin showed that height growth and seedling density were not significantly affected by winter browsing. Also, the forking caused by browsing tended to correct naturally.

Why aren't growth and development of sugar maple adversely affected by severe browsing? For one thing, losing the apical bud and part of the terminal leader doesn't hurt height growth. Also, a sugar maple can be browsed repeatedly before it is killed. The reason in both these cases is that a lateral branch usually takes over and becomes apically dominant. Forking, whether or not caused by browsing, is corrected as one leader becomes dominant and grows radially to eliminate "crook" and "sweep." The potential for leader elongation is determined by the conditions in the prior growing season and is not altered much by damage.

Other northern hardwood species may also be able to take heavy browsing without much damage as long as they too are growing vigorously.

If conditions allow these sugar maple seedlings to grow vigorously, they will not be damaged permanently by the heavy deer browsing.



References

- Jacobs, R. D. Growth and development of deer browsed sugar maple seedlings. J. For. 67: 870-874; 1969.
- Metzger, F. T. Sugar maple and yellow birch seedling growth after simulated browsing. Res. Pap. NC-140. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station; 1977. 6 p.

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